



U.S. Department of Energy  
Energy Efficiency  
and Renewable Energy



# Clean Communities of Western New York,

## Erie and Niagara, and Chautauqua and Cattaraugus Counties 2007 Update

2007 regional meeting  
Coordinator Industry Government Peer Exchange  
Pittsburgh PA  
June 2007



U.S. Department of Energy  
Energy Efficiency  
and Renewable Energy



# Clean Communities of WNY Inc.

A duly designated U.S.D.O.E. Clean City  
program member since 1994

What have we been up to?

Check us out....



# PUBLIC TRANSPORTATION

The Niagara Frontier Transportation  
Authority operates light rail, bus, hub-  
link and 2 airports



# Light Rail

**Railcars: 27 Light Rail Vehicles**

**Manufacturer: Tokyu Car Company, Double Truck model, 66 ft/10 inches long & 8 ft/7 inches wide, 66,000 pounds empty.**

**Built: 1983    Seats: 51    Normal Loading: 140 passengers**

**Powered by 650 VDC overhead catenary**

**Top Speed: 50 Miles per hour (surface section limited to 15 mph)**

**Wheelchair accommodation: via high-level platform at front door of lead car.**

**Park and Rides: 2 (University & LaSalle Stations totaling 1,399 parking spaces)**

**Route Miles: 6.4 Miles – Double Track**



**U.S. Department of Energy**  
**Energy Efficiency**  
**and Renewable Energy**



**Clean**  
**Cities**



**U.S. Department of Energy**  
**Energy Efficiency**  
**and Renewable Energy**



**Clean**  
**Cities**



# Niagara Frontier Transportation Authority

## N FTA Gets Greener!

- **NFTA has 30 hybrid-electric buses in service and added 13 more this June of 2007. the total bus fleet is 332 buses**
- **The 40-foot, 38-passenger buses cost 16.1 million. The supplier is Gillig Corp. of Hayward, Calif.**
- **The USDOT Mass Transit Account appropriated 1.25 million for FY 2005 and the NFTA will receive a \$2.75 million Transit Capital grant from the State Transit Dedicated Fund appropriated in May 2006.**





U.S. Department of Energy  
Energy Efficiency  
and Renewable Energy



# Hybrid Buses take to the Buffalo roads.







# NFTA, con't.

- In addition to reducing engine emissions by more than 50 percent, the hybrid vehicles also are expected to use at least 25 percent less diesel fuel than a traditional bus. Hybrid-electric buses are about 30 percent more efficient, and each bus reduces fuel usage by approximately 2,400 gallons each year.
- The hybrid buses are expected to get 5.3 miles per gallon of No. 2 diesel fuel, compared with 4.6 miles per gallon for the current buses. When the 30 high-tech buses join the fleet, fuel costs are forecast to drop by more than \$100,000 annually.



# Hydrogen will come to the NFTA

- **As part of a NYPA grant of 21 million, the NFTA will receive 7.5 million for a fully functional hydrogen electrolysis station with storage and fueling capacity.**
- **13.5 will be for hydrogen powered vehicles to operated by the NFTA and the NYS Parks in Niagara Falls.**
- **Initial vehicles are likely to be AW&HP conversions of a Chevrolet Silverado and a Ford Escape Hybrid. Clean Communities made these connections for the AW&HP and the NFTA through the MPO, the GBNRTC.**
- **NYSERDA is being asked to fund 1.5 million for this part of the project.**
- **In addition the NFTA will probably seek CMAQ funds for additional vehicles.**



U.S. Department of Energy  
Energy Efficiency  
and Renewable Energy



# **Clean Communities of WNY supports American Wind and Hydrogen project for University at Buffalo. First Hydrogen Prius in NYS.**





- **AWP&H and the State University of New York at Buffalo (SUNYAB) are demonstrating hydrogen as a transportation fuel on the North Campus. The project includes a hydrogen dispensing station and two hybrid Prius vehicles, with internal combustion engines converted to use hydrogen as a fuel. The demonstration project will run for two years, although the lease agreement for the vehicles and dispensing station will run for an additional three years, which would permit the project to be extended if the necessary funding is available.**



# Hydrogen Fueling

- Quantum Technologies makes the HICE version of the Toyota Prius modified to run on a combination of hydrogen and battery power.
- Utilizing portable tanks gaseous hydrogen is injected into the engine, which then burns the hydrogen fuel much as it would burn gasoline for combustion.





# Hydrogen range

- Fueling takes 2 hours and the tanks under the Prius hold 1.6 kilograms of  $\text{cp/h}$ , about 1.5 gge.
- The Prius range is 70-80 miles
- The cost of equipping the Prius is \$60,000.
- The present cost of hydrogen fuel is about \$40.00 gge but could be around \$4. with access to an electrolysis facility.



## **CCofWNY supports American Wind Power and Hydrogen SUNYAB hydrogen fueling for demonstration project.**

**•The University at Buffalo, already home to 25 lite duty compressed natural gas vans and trucks, added the hicc hybrid technology Toyota Prius to the fleet. CC board member and stakeholder, Fredric Smeader, also an engineer at UB has already driven the vehicle and reports it runs great!**





# The New York Power Authority Commits to Hydrogen

In Fall 2006, the New York Power Authority (“NYPA”) announced a \$21 million project covering the generation of hydrogen from Niagara Falls’ hydropower and the supply of up to 28 hydrogen - fueled vehicles. Potential sites for the hydrogen production facilities are at maintenance facilities operated by the Niagara Frontier Transportation Authority (“NFTA”) and at Niagara Falls State Park. Clean Communities was part of the planning team for this potential project.



# Stakeholders tour potential site for hydrogen station in Niagara Falls State Park spring '06





# Hydrogen in the NYS Parks

- Niagara Falls State Park will become a center for the development of hydrogen fuel deployment in the near term. An electrolysis station is planned for 2008. Toro received a \$380,000. grant from NYSERDA for grounds keeping equipment for NFSP.
- \$21 million dollars will come from NYPA, the NYS Power Authority to fund 2 stations



# More...

- One for the NFS Park.
- The cost for one station is approximately 7.5 million dollars.
- The station would be fully implemented with storage and fueling facilities within 3 years.



**Helping to pioneer Biodiesel '02-'07. CCofwny supported this highly successful demonstration project. Today, while the demonstration has ended NOCO continues to use biodiesel in its' own fleet. With a Biodiesel Production Facility in the building stages it will not belong before WNY will see Biodiesel at the pump.**

## **Biodiesel NYSERDA Project**

- Biodiesel B20 Fuel was supplied to:
  - NOCO's Fleet- over 40 tractors and tank wagon delivery trucks.
  - Town of Tonawanda
    - 16 town school buses
    - 12 highway/sewer department vehicles
  - Local Municipal Bus Fleet
    - 35 public transit buses

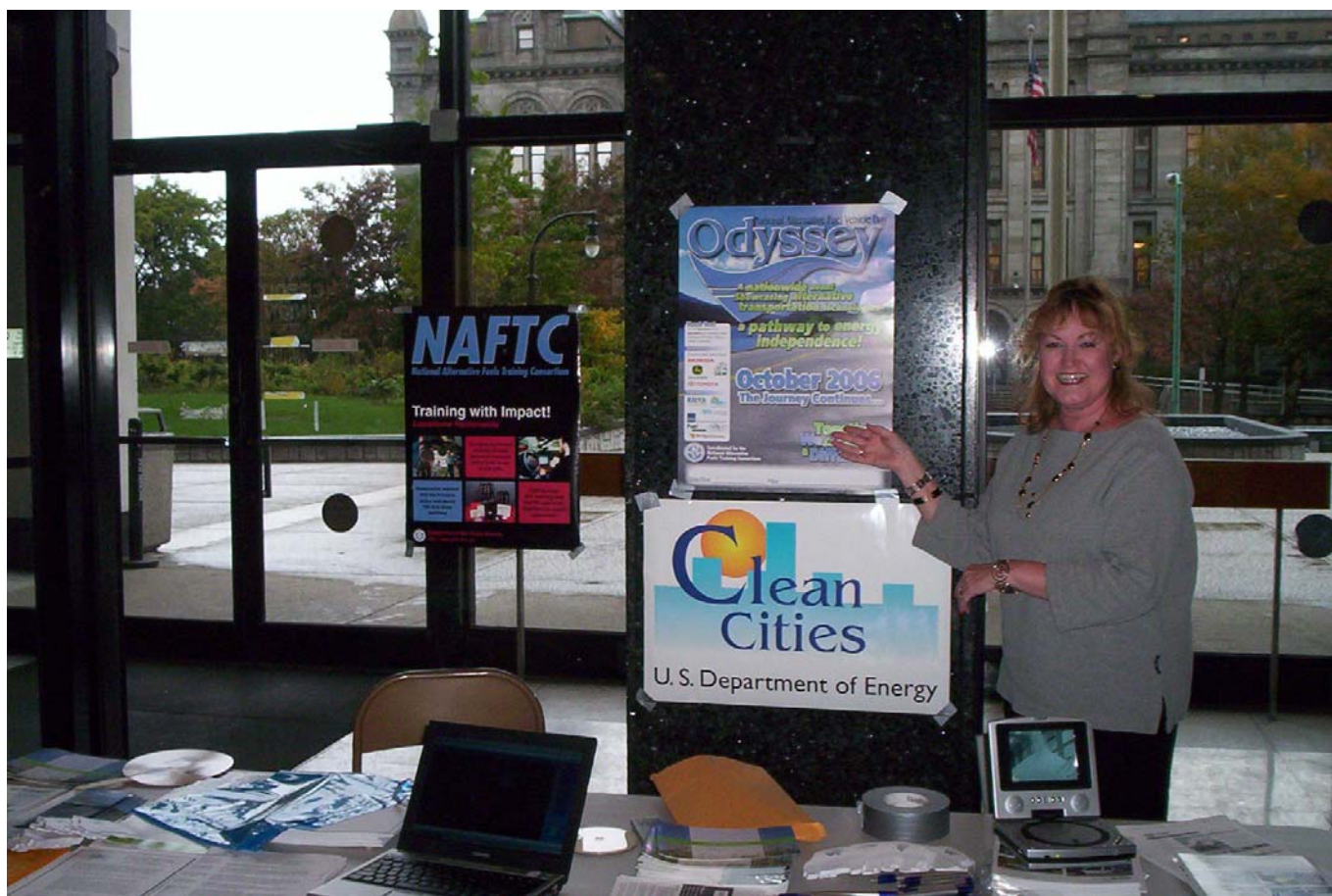




# Whats Next?? GLOBEO...

- at the Buffalo Museum of Science.
- CCofWNY one of 8 planners for a 3 month exhibit on Global Warming and Biodiversity.
- CCofWNY will have a permanent stand alone exhibit for 3 months showing the effects of transportation pollution on local air quality and how that effects our daily lives.

# AFV Odyssey Day 2006 in Erie County





# AFV Odyssey participants



CCofWNY took info to the 2000 Erie County workers in the lobby of the downtown county office building.



# Other outreach events from June '05 through September '06

WNY Earth Day Family expo August '05

Beyond a Billion event '06

Biodiesel Meeting April '06

Washington Congressional meetings June '06

WNY Earth Day Family expo June '06

## Helping Erie County School Districts Apply for Grant Dollars

- CCofWNY secured the school partners and applied with the County of Erie and 6 school districts for dollars to educate school bus fleets about the importance of anti-idling protocols and for equipment grants to retrofit diesel engines in school buses to reduce pollution. We did not receive the education grant but were successful on the equipment grant. The County will manage this project.





# E85 retails in Buffalo in 2007

- **CCofWNY identified 2 partners , one a private retail fueling station owner operator and the University of Buffalo, and partnered with NOCO energy on a grant application to retail ethanol. We were successful and should have ethanol at two public sites and 2 private sites by the end of 2007.**





# Coalition Sustainability

## Current Status

- The coordinator of our coalition is a volunteer.

## Steps to Become Self-Sustaining

- Rent Free - We are housed in a county Legislative office in return for telephone coverage. The office has more 'open' hours in return.

## Membership Structure/Strategies

- A dues based agency is beginning to seem like a reality. We will be seeking the MPO as a major sponsor for 2008. And will begin a planning committee to establish a dues structure for phase in in 2008. The coordinator is serving on a committee to review the long range plan and the MPO has added language to the TIP to fund an as yet not named alt fuel project.





# The Power and Majesty of the Niagara Frontier





# Clean Communities of WNY, Inc.

- Linda M. Hardie, Executive Director
- 1074 Cleveland Drive
- Buffalo, New York 14225
- [Ccofwny.lmh@verizon.net](mailto:Ccofwny.lmh@verizon.net)
- 716-634-1038, fax to 716-839-4143